

Diving Safety Lines

Spring 2016 Edition

Diving Safety Lines is a semi-annual release by the ORM/Expeditionary Warfare Safety Programs Directorate of the Naval Safety Center. The information contained herein is a summary of research from selected reports of diving hazards to assist you in your mishap prevention program. *Diving Safety Lines* is intended to give advance coverage of safety-related information while reducing individual reading time. This bulletin does not, in itself, constitute authority but will cite authoritative references when available. It is recommended that this bulletin be made available to all hands.

From the Diving Safety Division Head

CWO3 William “Toby” Turner

Hello from the Diving Division. These past several months have been difficult here at the Safety Center as we mourn the loss of one of our own. If you haven’t heard, HMC Chris Precht passed away in mid-January. He was an outstanding shipmate and friend to many in our community and during his time here at the Safety Center he had the opportunity to visit many of your commands. Chris’s keen eye for detail and straightforward demeanor has made a positive impact on not only diving medical readiness but the diving community as a whole. He is sorely missed.

We released our yearly unit due messages FY16 DIVING SAFETY ASSESSMENTS (DSA) (141705Z SEP 2015), FY16 SUBMARINE DIVING SAFETY ASSESSMENTS (DSA) (141708Z SEP 2015) and FY16 USMC DIVING SAFETY ASSESSMENTS (DSA) (291715Z SEP 2015) prior to release of the fall edition of the diving safety lines yet we are still struggling to schedule units who are due and overdue. I understand operational requirements, workload, and other inspections drive your unit’s schedules but with the degree of flexibility we have here at the Naval Safety Center there is no reason that we can’t accommodate or work around your units schedule to get the Diving Safety Assessment completed. If your unit is due for an assessment this year please contact us ASAP to start working on scheduling.

Diving Safety Lines

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Head, Diving & Salvage – CWO3 William “Toby” Turner

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Master Diver's Corner

NDCM (MDV/DSW/EXW/SW) David “Shep” Schoephoerster

By the time the next Diving Safety Lines hits the street, I will be on terminal leave or retired after serving 30 years. It has truly been an honor to serve with the best divers in the world, for that, HOOYAH!!!

We're back to publishing the DSL two times a year, spring and fall. Diving Advisories or AIG 239 (NAVSEA OOC) come out when there is something to put out to the fleet for diving concerns. So those are two ways to communicate to you, but we're finding that items of concern are not fixed after dive lockers have signed or initialed saying that they have read and understand these.

So the first one of course is medical items, this is the third or fourth time that I have discussed this. Get the expired medical items out of Kit 1, Kit 2 and dive station med bags. If you're signing for conducting the inventories (PMS) for the chamber medical kits and there are expired medical items, you are GUN DECKING PMS, and we know what happens when we do that. Anything that has an expiration date on it, check it. There is only one way to extend expired medical items and that is through FEDLOG. FEDLOG will provide you with a block if the shelf life can be extended. If you are doing this, you need to provide a log with a printout of the FEDLOG page that corresponds to the item you are extending. If you do not / cannot provide the proof it will not be accepted and result in a discrepancy.

Diving Advisory 15-12, is dealing with MK20 maintenance (PMS) procedures and repair parts. If you are using the red thickness gauge, OTS is marked on the front and HOTT is on the back, this is a non OEM thickness gauge not authorized for use. This gauge is used to adjust the upper and lower limits on the valve insert fork lever. The ONLY thing that is authorized to be used is the Gholson gauge or standard feeler gauge. You were also advised to conduct an inventory of all MK20 parts to ensure they meet the standards in the O&M manual, manufacturer technical manual and PMS. If you have further questions they should be directed to NAVSEA OOC.

MDV Billy Gilbert will be my relief and will be checking onboard in July-August timeframe. He is transferring in from MDSU-2 as the Training Master Diver.



DSA tips and best practices!

NDC (DSW/SW) Fred Taylor

I would like to reinforce two things mentioned in both MDV's and CWO's articles. First off, scheduling Diving Safety Assessments (DSA) for dive lockers around the world is challenging without input from the fleet! I feel like a tele-marketer selling liquid soap or life insurance when I have to 'cold call' lockers or subs and scavenge for dates. BRAVO ZULU to those whom have already contacted us and set up a prospective assessment date; very sexy! Secondly, we are finding the 'repeat' discrepancies or as I like to call them, "Learning opportunities" that were discussed or called out in previous versions of Diving Safety Lines or are common trends among dive lockers these days.

So here are some tips or lesson's learned from previous assessments:

- 1) *Labeling of secondary hazardous material containers.* Got it! The Non-Ionic detergent container was rusty the day it showed up. Put it in a clean plastic bottle and label it with DD Form 2522....It's on the HAZMAT checklist question No. 6.
- 2) *Training Records and Training Plans.* Incorporate core subjects as referenced in question No. 2 on the Training Checklist (Operations & Planning, SCUBA, Physics & Physiology, Medicine, Decompression Procedures, Dive Emergencies,...etc.) Put these on the training plan and then tailor the other subjects to suit your command's mission. It is also common for deployable detachments or platoons to have personnel that have missed scheduled training. For this I recommend at the end of each quarter Training POs schedule a block called "DSL/AIG/Make up Training." Then it's all covered.
- 3) *Satellite MRC Decks.* Been there done that! Each work center has a 43P1 which should be configured as per the 4790.8c 3-M Manual:

"2-4.4 The Work Center PMS Manual is designed to provide a ready reference of planned maintenance requirements which will be retained in the working area for use by the Work Center.

Return the MRC to the Work Center file upon completion of the requirement."

When I find a standalone MRC binder in the recompression chamber or dive boat, the first question I ask is, "Are these cards updated with the current force revision?" That's usually when the tap dance starts and shoulder shrugging begins. So what are we teaching the young guys with this short cut

process? Card verification with the MIP and LOEP is out the window! Unless the Work Center Supervisor (WCS) has a log of all MRC decks which are labeled with the current force revision these unapproved cards should be destroyed on site.

- 4) *Situational Requirements or R Checks.* The WCS doesn't have a chance at capturing all performed checks if the assigned maintenance person doesn't fill out the R Check sheet and turn it in at the end of the week or the mission. I recommend WCSs go through all the MIPs and find every applicable R Check and list those in an R-Check Binder which has a spot for run hours, the serial number of the gear which was used, and whom performed the maintenance. I get very animated when I see a WCS signature block at the bottom of the Daily R Check Log which is labeled, R CHECKS ENTERED IN SKED!
- 5) *Maintenance Responsibility.* It is common that when R Checks are performed by a group of personnel on dive station or a platoon that is deployed, the senior member present signs for all maintenance performed. The WCS is then signing the 13 week report back at the locker. If the R-check logs are not retained in conjunction with the 13 Week Report, a record of who actually conducted the maintenance is lost. Although not prohibited by the 3-M Manual, this is not how the process was intended.

I appreciate all the hard work and pride that goes into maintaining your dive locker and getting ready for an assessment. Use these tips to put some of these issues to rest and continue on with the outstanding work going on across the diving community.

HOO-YAH Deep Sea!



Accident/Incident Investigation Requirements

NDC (DSW/EXW/SW/FPJ) Joshua D. Benjamins

An accident is an unexpected event that culminates in loss of or serious damage to the equipment or loss of personnel. An incident is an unexpected event that degrades safety and increases the probability of an accident.

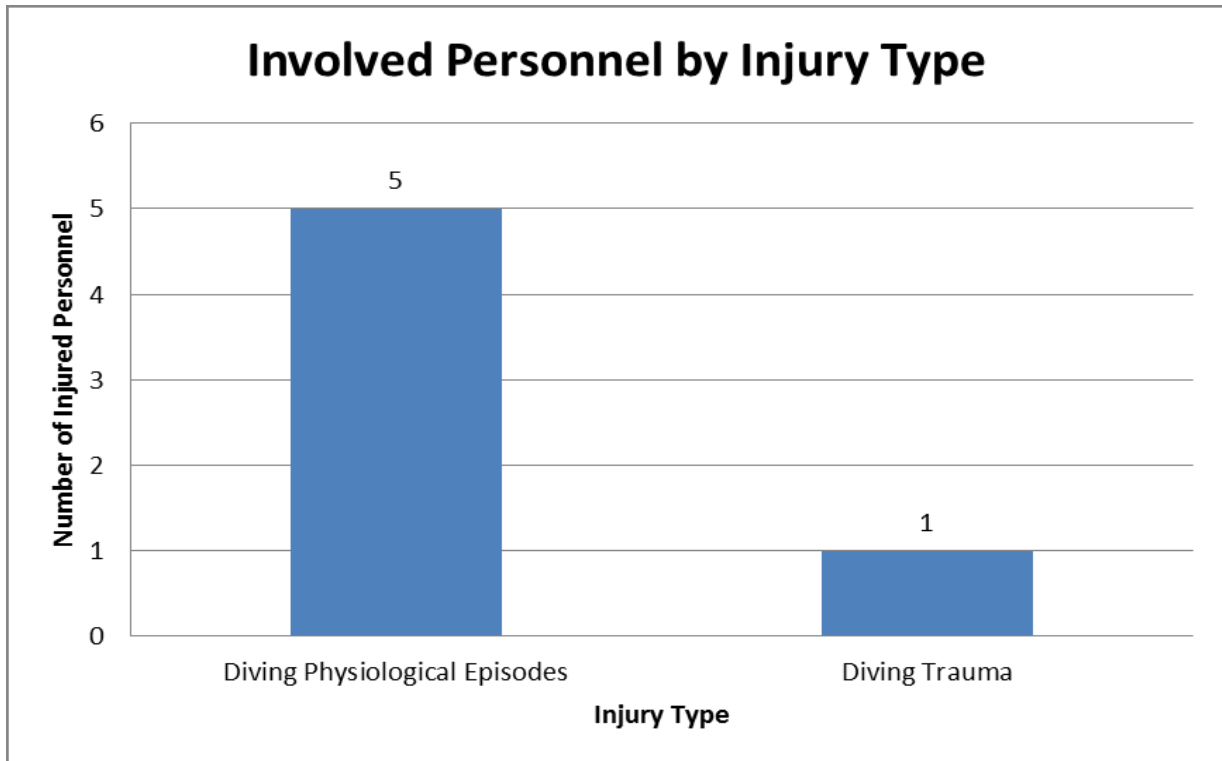
The number of diving accidents/incidents involving Department of Defense (DOD) divers is small when compared to the total number of dives completed each year. In the rare case an accident/incident should happen, the DOD divers shall perform the following procedures: Immediately secure and safeguard from tampering all diver-worn and ancillary/support equipment that may have contributed to the accident/incident.

In the rare occasion the accident/incident is bad gas, the most current air sample paperwork would be needed to find the source of the bad gas. With this being said, it is imperative that all diving commands maintain the current air sample results on any and all divers air sources used to fill any diving cylinders. All divers who utilize local dive shops to fill SCUBA cylinders are highly recommended to request and maintain current air sample reports from the fill location. All air purity reports will be equal to or greater than the standards IAW US Navy Dive Manual requirements.

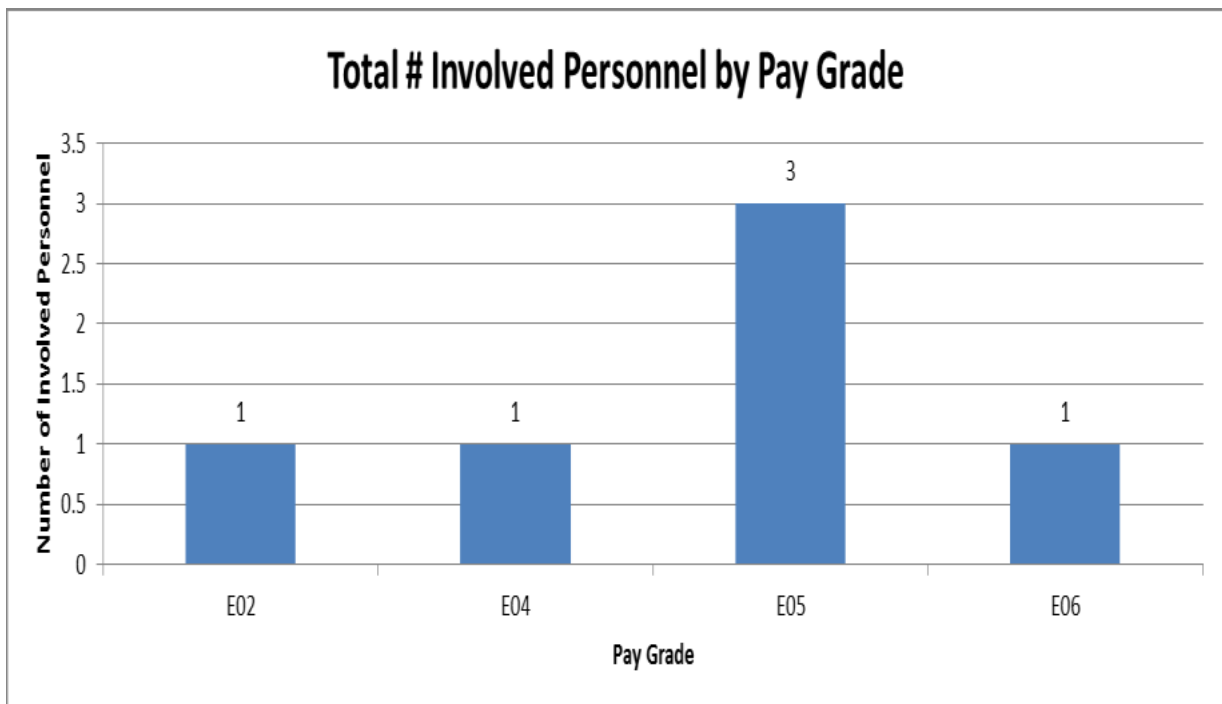
This will help in more ways than one. It will create a muscle memory to always ask for a current air sample report from any location utilized for air. It will keep the filling station up to date on their air sample purity reports. It will also help divers keep up with their Objective Quality Evidence (OQE) for the proper accident/incident reporting procedures if an investigation were ever deemed necessary. Overall it is a safe way to conduct business and the proper way to handle life support equipment.

P.S. WESS Help Desk # 757- 444-3520 ext. 7048

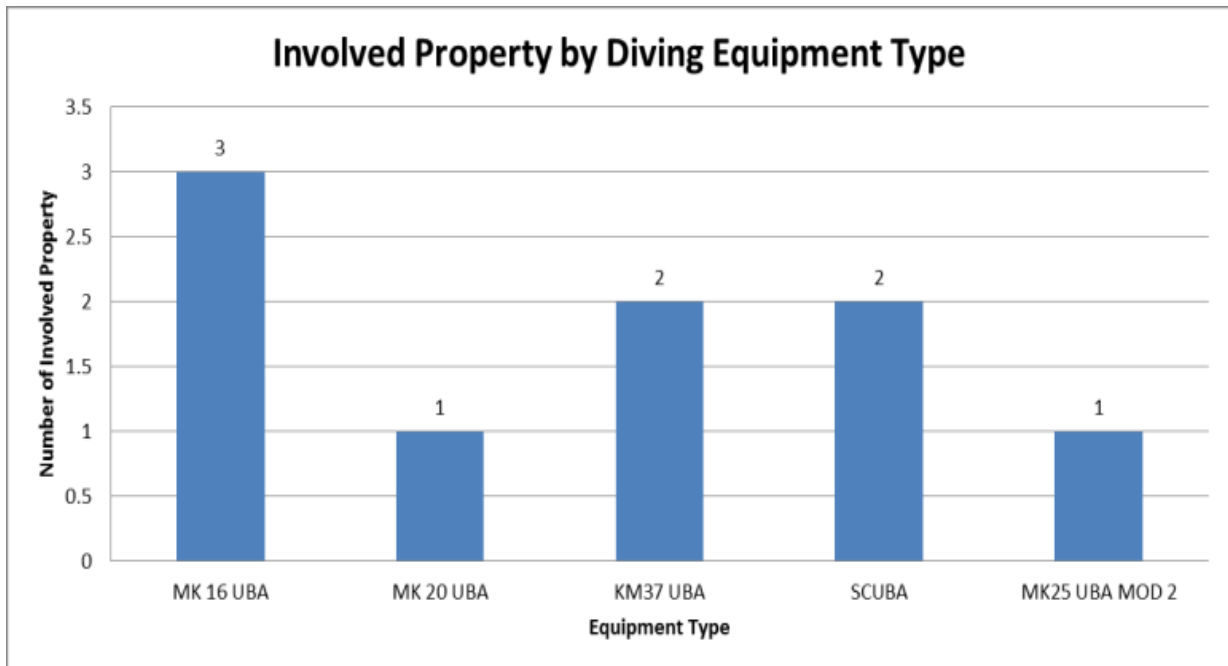
FY-16 Dive Mishap/Hazard Analysis



Total Number of Injured Personnel by Injury Type in FY15Q4 – FY16Q1 Mishaps



Total Number of Involved Personnel by Pay Grade in FY15Q4 – FY16Q1 Mishaps



Total Number of Involved Equipment by Equipment Type in FY15Q4 – FY16Q1 Mishaps

Diving Safety Assessment Trends

36 diving commands were assessed between FY15Q4 – FY16Q1. The following Top 5 PMS related trends identified during the Diving Safety Assessments (DSA) were emphasized by the assessment team:

42.9% of assessed commands did not properly label secondary containers for hazardous material with material name, manufacturer address, and nature of hazard.

27.3% of assessed commands did not have depth and submersible pressure gauges compared results recorded, and available for review.

24% of assessed commands were not conducting the minimum number of dives every six months to maintain diver qualifications.

19% of assessed commands did not designate at least one officer and one senior enlisted person as ORM assistants in writing.

18.2% of assessed commands are not following their training plan or do not have records of attendance and critiques for completed training.



USCG Liaison



DVC Michael West

It has been a privilege to get out to so many different Diving units over the past year. There is no shortage of newly emerging dive missions, and I have seen some really new and creative ways of tackling old jobs. The topic I wanted to discuss in this issue of the Diving Safety Lines however, is probably not the first thing that comes to mind when we talk about dive gear. I want to discuss the “Dive Boat.” Based on the unit and the mission, it can serve as anything from a way to get to the job, the platform you’re working off of, and even your emergency vehicle when things go wrong. With us relying on these vessels so much, there are some things we can do to make sure they will best serve us when we need them. One of the things I see that is an easy fix is the fire extinguishers we keep on board our boats. That fire extinguisher can make the difference between putting out a fire that causes minor damage, versus a small fire that turned into a large one that got out of control and caused the loss of the vessel. I understand we get busy and things like boat checks seem to lose importance, but watching an electrical connection arc and spark and catch on fire will rapidly recalibrate your priorities! I have seen fire extinguishers where the needle was buried in the red, and they are being signed off as “SAT” on boat checks. If you see something that’s not right during boat checks, make the time to make it right. The next one is not necessarily part of the boat, but the trailer that it rides on. We regularly see trailers in service with no means employed for capturing the mileage put on them. Having been witness to a trailer wheel (no longer attached to the trailer) passing up the tow vehicle while going down the highway, I can understand why we have this requirement and the importance of keeping track of how many miles those wheel bearings have covered. This last one is just some food for thought. The most important part of those boats, are the people we put on them. When I ask to see the life jackets on our boats during a safety assessment, inevitably I get a sideways look while folks start digging around producing PFDs they obviously don’t wear. Those things only do their jobs when you wear them, and they can make the difference between getting rescued, or becoming the object of a recovery mission. Use your ORM, and be your own best advocate!

Top 10 Navy Commands (01OCT 15-15APR 16)

TBT in minutes	Total Dives	UIC	Command Name
268,288	6,076	N0610A	NDSTC Panama City
233,222	3,900	N49746	NSW BASIC TRNG COMMAND
145,655	1,963	N32253	PEARL HARBOR NAVSHIPYD AND IMF
117,372	1,112	N4523A	PUGET SOUND NAVAL SHIPYARD
115,299	1,834	N41150	NORFOLK NAVAL SHIPYARD AND IMF
98,064	1,483	N55236	SOUTHWEST RMC SAN DIEGO, CA
96,819	626	N68316	NAVSUBSUPPFAC NEW LONDON, CT
75,187	667	N39589	NSWG 1 TRAINING DET
67,219	**	N0463A	NEDU (**# of dives not available)
55,899	1,017	N08973	SDV TEAM 1

Top 10 Marine Corps Commands (01OCT 15-15APR 16)

TBT in minutes	Total Dives	UIC	Command Name
199,205	1,989	M06050	MC DIVE SCHOOL (NDSTC)
32,526	327	M11009	1ST RECON BN, 1ST MARDIV
19,300	702	M20905	MARINE RAIDER REGIMENT
18,366	719	M08321	2ND RECON BN, 2ND MARDIV
14,028	797	M20920	1ST MARINE RAIDER BATTALION
13,457	450	M67360	3RD RECON BN, 3RD MARDIV
3,666	119	M73010	3RD FORCE RECON COMPANY
1,733	112	M14706	H&S / C CO, 4TH RECON BN
1,052	46	M37101	MARINE CORPS SYSTEMS COMMAND
882	44	M28353	4TH FORECONCO

Top Coast Guard Commands (01OCT 15-15APR 16)

TBT in minutes	Total Dives	UIC	Command Name
7,530	202	G34273	REGIONAL DIVE LOCKER EAST
7,107	214	G15265	REGIONAL DIVE LOCKER PACIFIC
5,706	293	G32426	REGIONAL DIVE LOCKER WEST
2,182	133	G15255	USCGC SEQUOIA
789	67	G73920	CGLO-NDSTC

Top 10 Air Force Commands (01OCT 15-15APR 16)

TBT in minutes	Total Dives	UIC	Command Name
82,503	1,405	FFGS70	AF COMBAT DIVE SCHOOL (NDSTC)
5,569	170	FFF6D2	23RD SPECIAL TACTICS SQUADRON
3,386	51	FF3Y50	66TH TRAINING SQUADRON
3,369	238	FFB700	48TH RESCUE SQUADRON
2,807	166	FB4830	38TH RESCUE SQUADRON
2,731	107	FFFFP8J	22ND SPECIAL TACTICS SQUADRON
2,665	196	FFF3N6	24TH SPECIAL TACTICS SQUADRON
2,444	93	FF0B90	212TH RESCUE SQUADRON
2,074	112	FB6325	103rd RESCUE SQUADRON
1,701	76	FF4559	58TH RESCUE SQUADRON